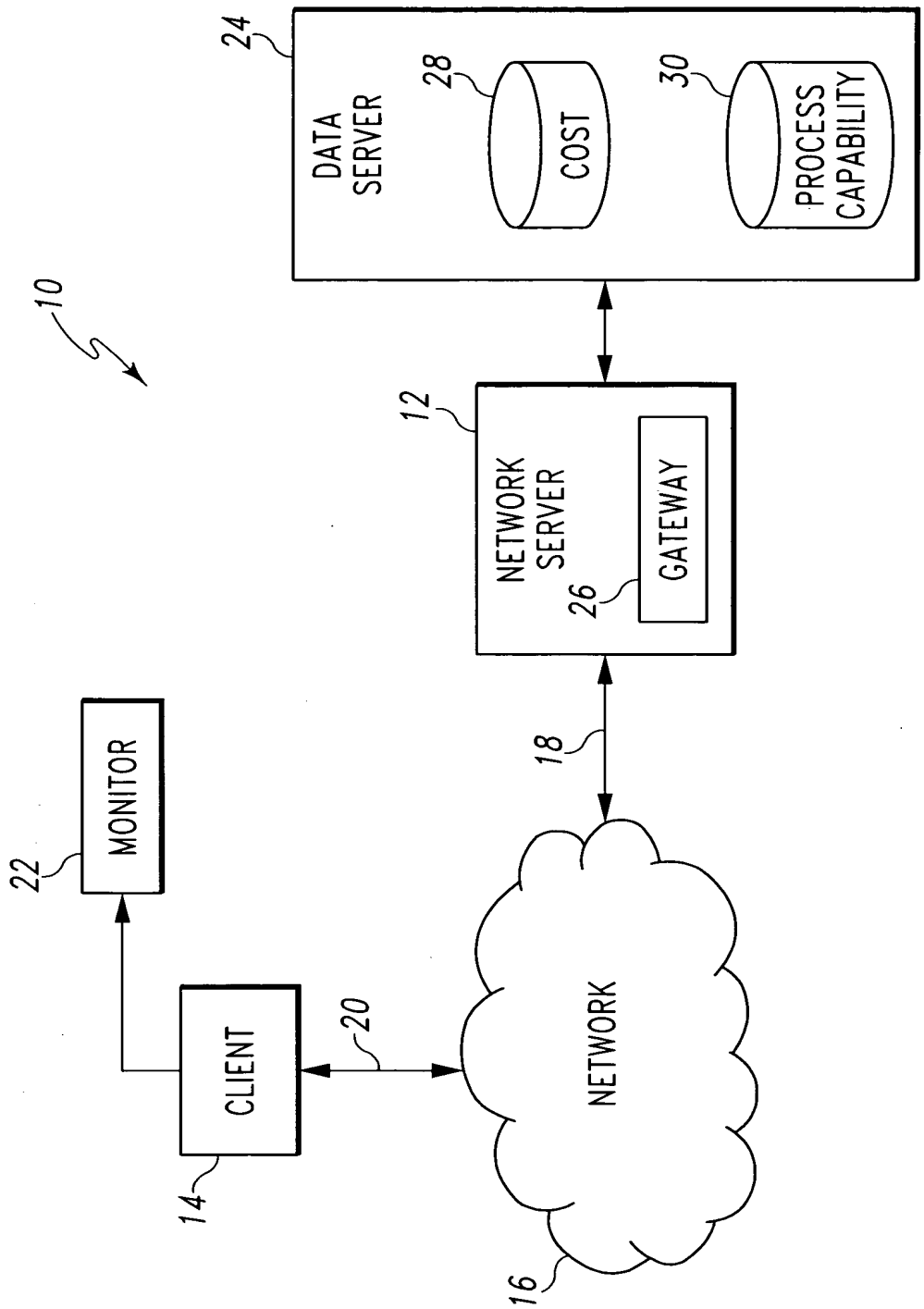

10
24
DATA SERVER
28
COST
30
PROCESS CAPABILITY
12
NETWORK SERVER
26
GATEWAY
18
22
MONITOR
CLIENT
14
20
NETWORK
16

Fig. 1

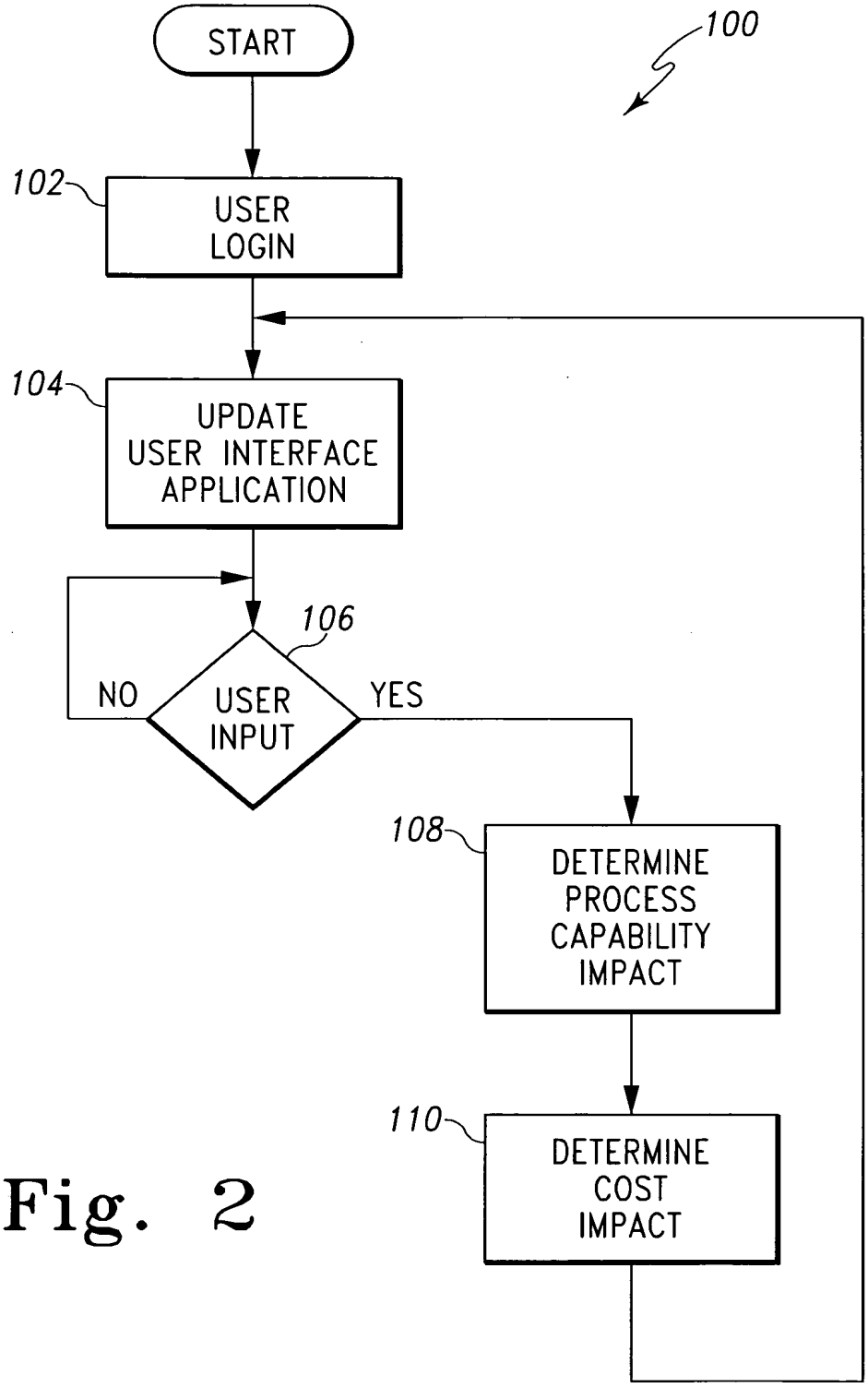

START
100
102
USER
LOGIN
104
UPDATE
USER INTERFACE
APPLICATION
106
NO
USER
INPUT
YES
108
DETERMINE
PROCESS
CAPABILITY
IMPACT
110
DETERMINE
COST
IMPACT

Fig. 2

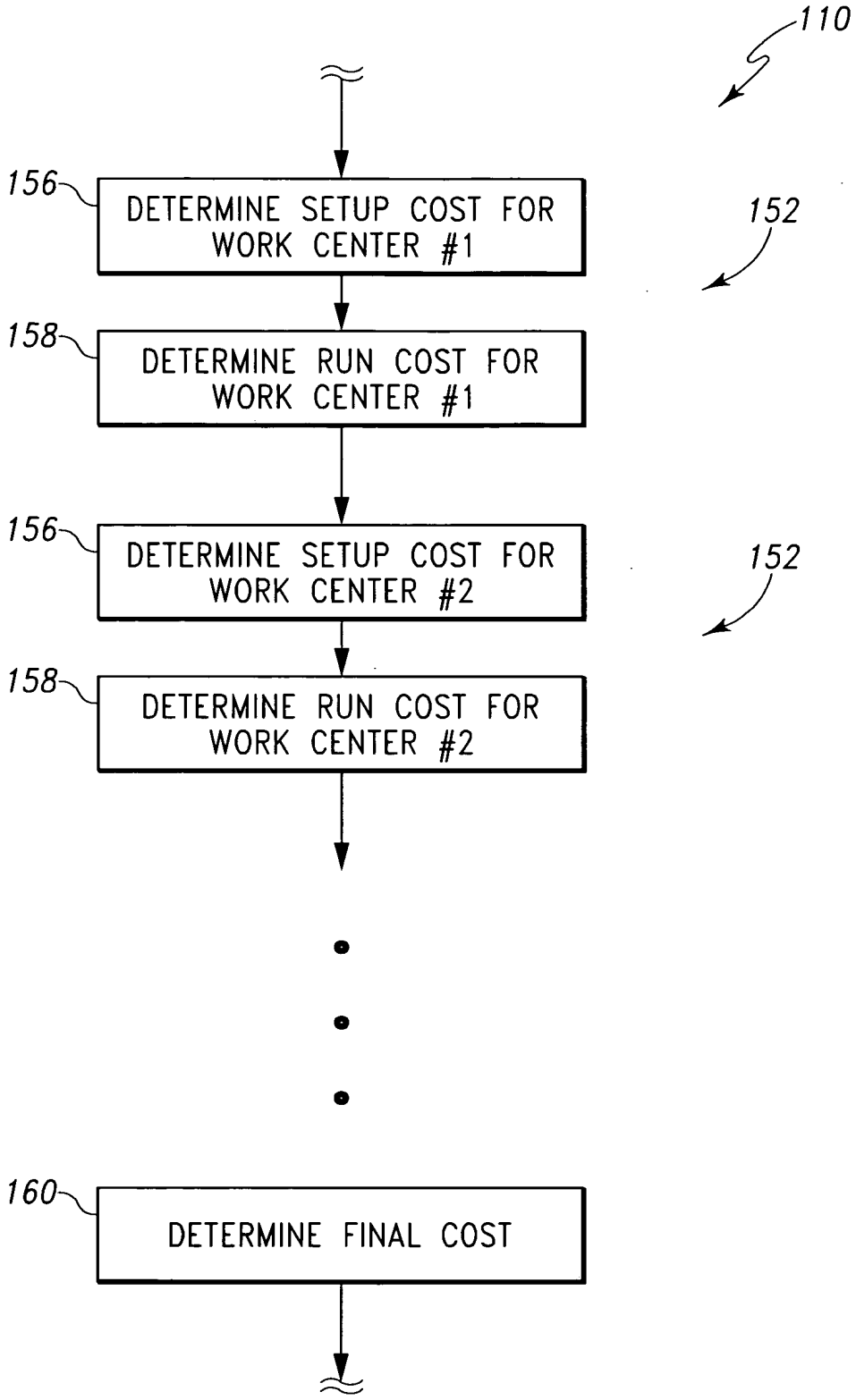

110
156
DETERMINE SETUP COST FOR WORK CENTER #1
152
158
DETERMINE RUN COST FOR WORK CENTER #1
156
DETERMINE SETUP COST FOR WORK CENTER #2
152
158
DETERMINE RUN COST FOR WORK CENTER #2
160
DETERMINE FINAL COST

Fig. 3

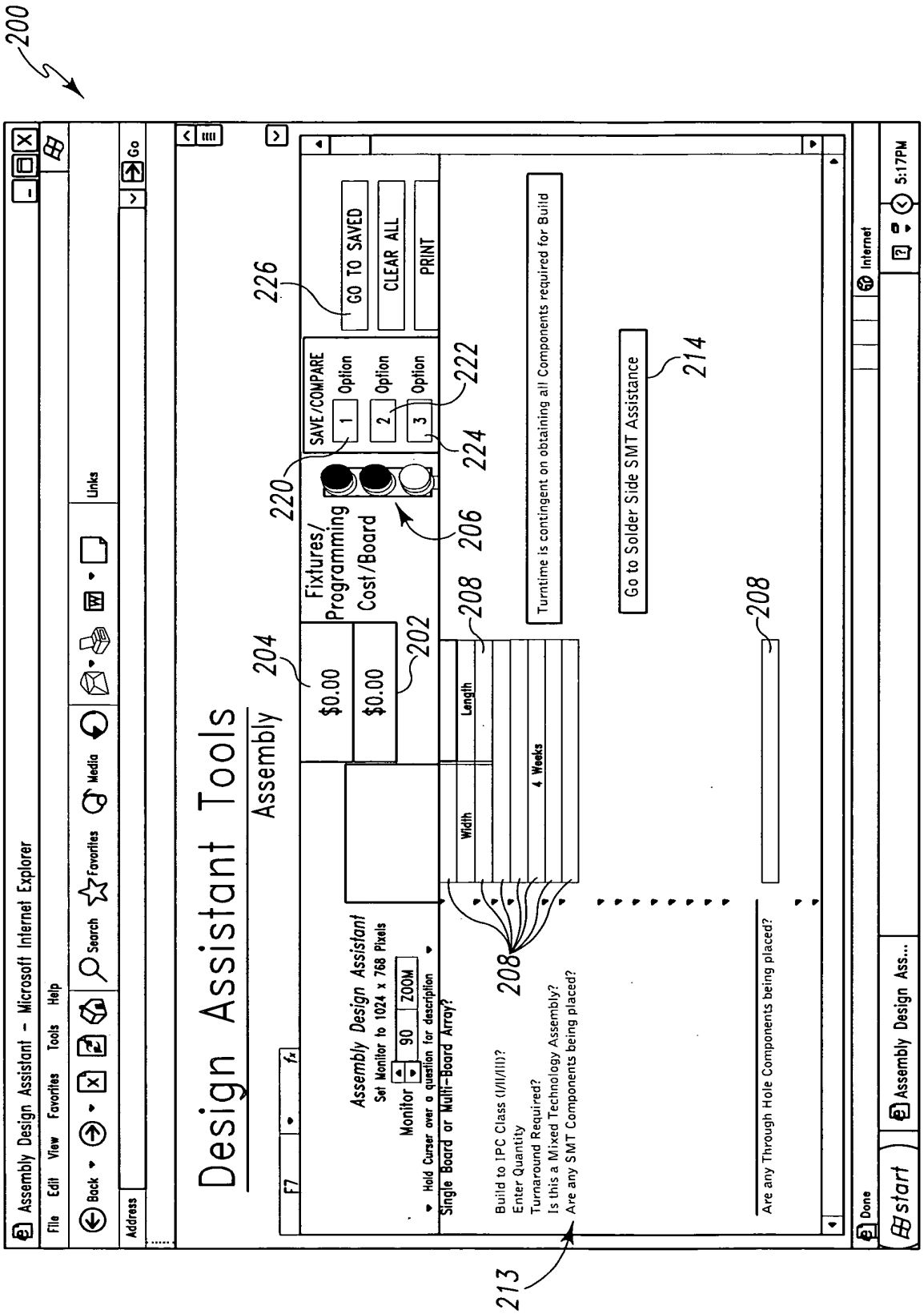

200
Assembly Design Assistant - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media Links
Address Go
Design Assistant Tools
Assembly
F7
Assembly Design Assistant
Set Monitor to 1024 x 768 Pixels
Monitor 90 ZOOM
Hold Cursor over a question for description
Single Board or Multi-Board Array?
Build to IPC Class I/II/III?
Enter Quantity
Turnaround Required?
Is this a Mixed Technology Assembly?
Are any SMT Components being placed?
Are any Through Hole Components being placed?
Width
Length
4 Weeks
$0.00
$0.00
Fixtures/ Programming Cost/Board
SAVE/COMPARE
1 Option
2 Option
3 Option
GO TO SAVED
CLEAR ALL
PRINT
Turntime is contingent on obtaining all Components required for Build
Go to Solder Side SMT Assistance
202
204
206
208
208
208
213
214
220
222
224
226
Done
Internet
start
Assembly Design Ass...
5:17PM

Fig. 4

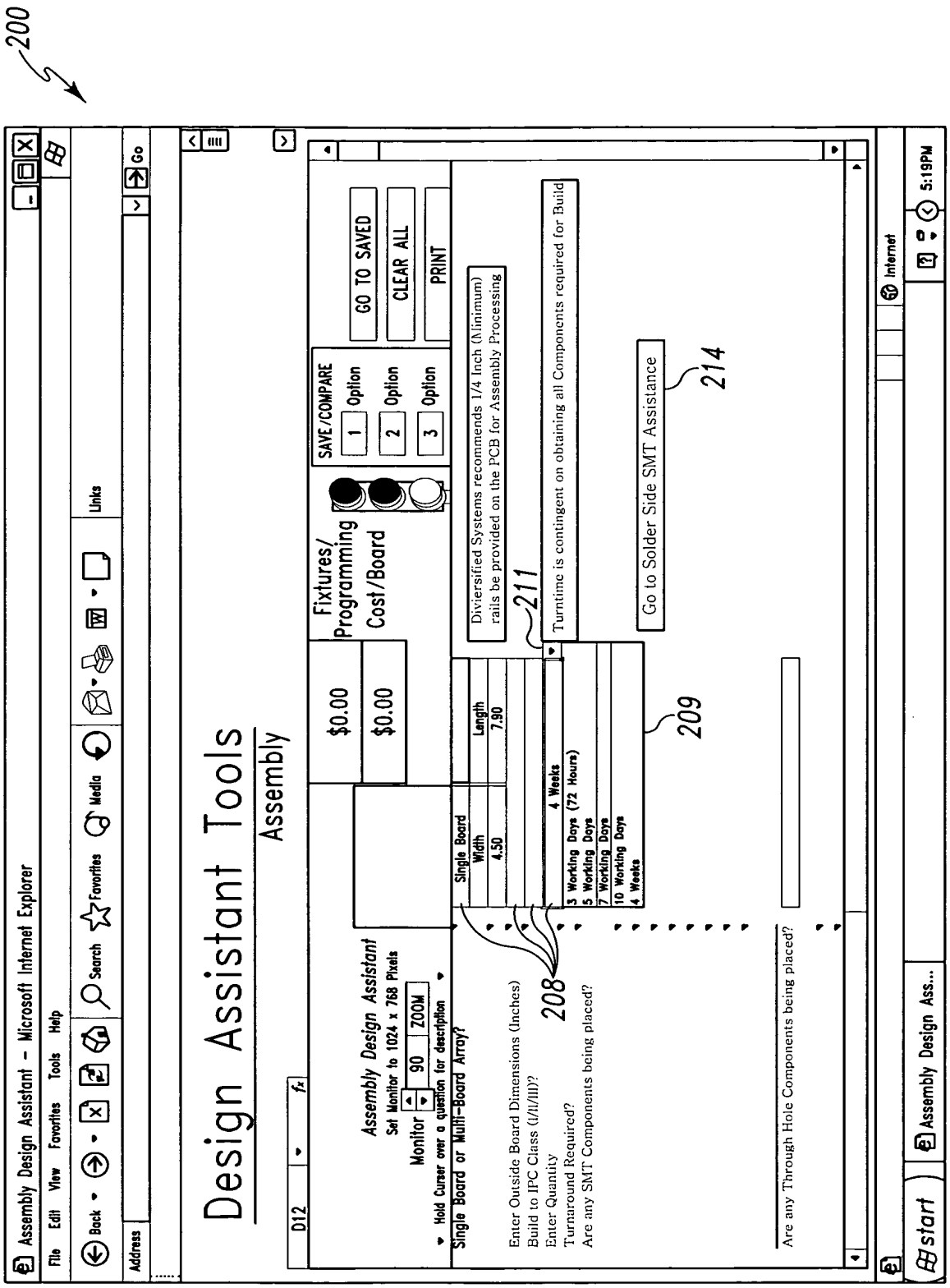
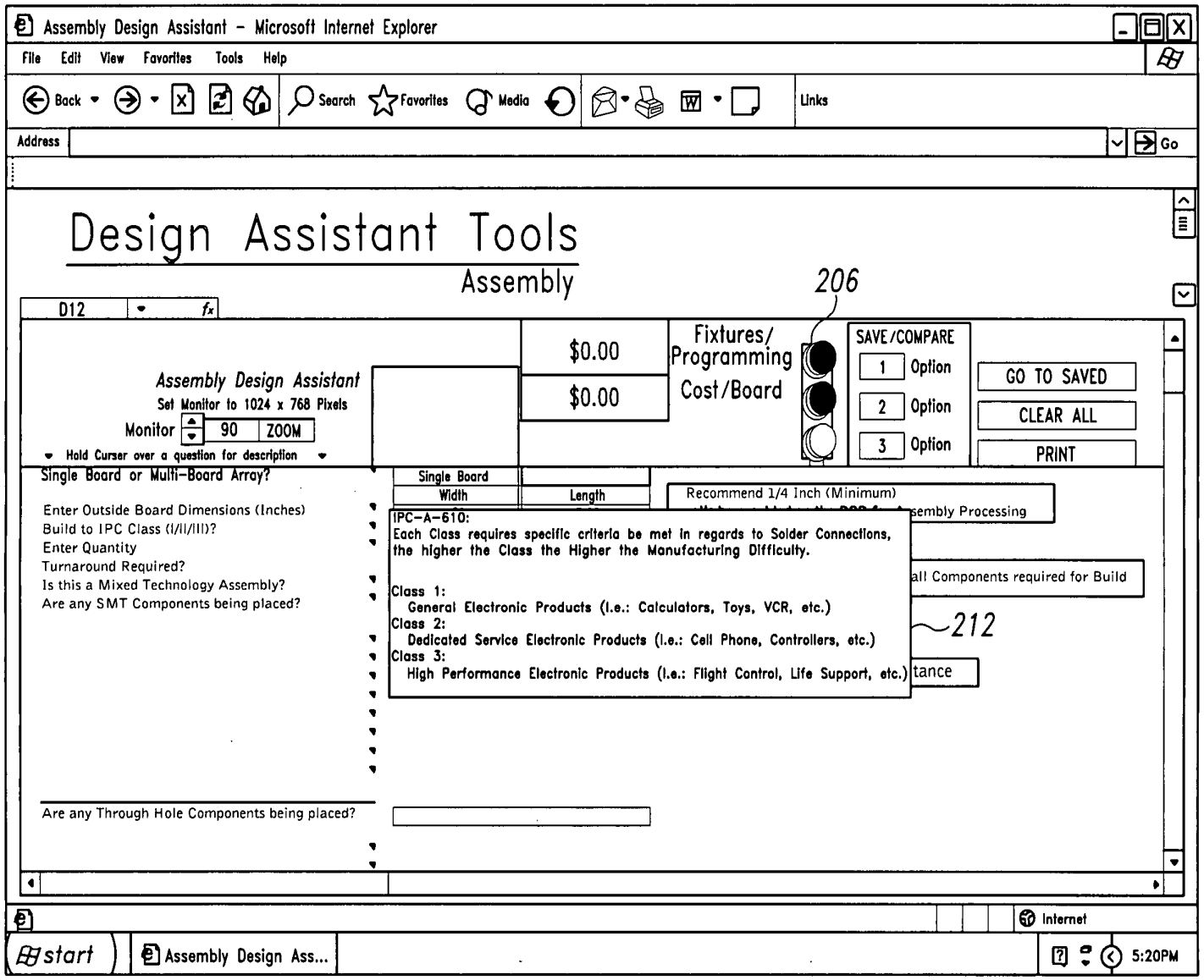

200
Assembly Design Assistant - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media Links
Address
Go
Design Assistant Tools
Assembly
D12
Assembly Design Assistant
Set Monitor to 1024 x 768 Pixels
Monitor 90 ZOOM
Hold Cursor over a question for description
Single Board or Multi-Board Array?
Enter Outside Board Dimensions (Inches)
Build to IPC Class (I/II/III)?
Enter Quantity
Turnaround Required?
Are any SMT Components being placed?
208
Single Board
Width
4.50
Length
7.90
3 Working Days (72 Hours)
5 Working Days
7 Working Days
10 Working Days
4 Weeks
209
$0.00
Fixtures/ Programming
$0.00
Cost/Board
SAVE/COMPARE
1 Option
2 Option
3 Option
GO TO SAVED
CLEAR ALL
PRINT
Diviersified Systems recommends 1/4 Inch (Minimum) rails be provided on the PCB for Assembly Processing
211
Turntime is contingent on obtaining all Components required for Build
Go to Solder Side SMT Assistance
214
Are any Through Hole Components being placed?
start
Assembly Design Ass...
Internet
5:19PM

Fig. 5


Assembly Design Assistant - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media Links
Address Go
Design Assistant Tools
Assembly
206
D12
$0.00
$0.00
Fixtures/ Programming Cost/Board
SAVE/COMPARE
1 Option
2 Option
3 Option
GO TO SAVED
CLEAR ALL
PRINT
Assembly Design Assistant
Set Monitor to 1024 x 768 Pixels
Monitor 90 ZOOM
Hold Curser over a question for description
Single Board or Multi-Board Array?
Single Board
Width
Length
Recommend 1/4 Inch (Minimum)
Enter Outside Board Dimensions (Inches)
Build to IPC Class (I/II/III)?
Enter Quantity
Turnaround Required?
Is this a Mixed Technology Assembly?
Are any SMT Components being placed?
IPC-A-610:
Each Class requires specific criteria be met in regards to Solder Connections, the higher the Class the Higher the Manufacturing Difficulty.
Class 1:
General Electronic Products (I.e.: Calculators, Toys, VCR, etc.)
Class 2:
Dedicated Service Electronic Products (I.e.: Cell Phone, Controllers, etc.)
Class 3:
High Performance Electronic Products (I.e.: Flight Control, Life Support, etc.)
212
Are any Through Hole Components being placed?
Internet
start
Assembly Design Ass...
5:20PM

200

Fig. 6

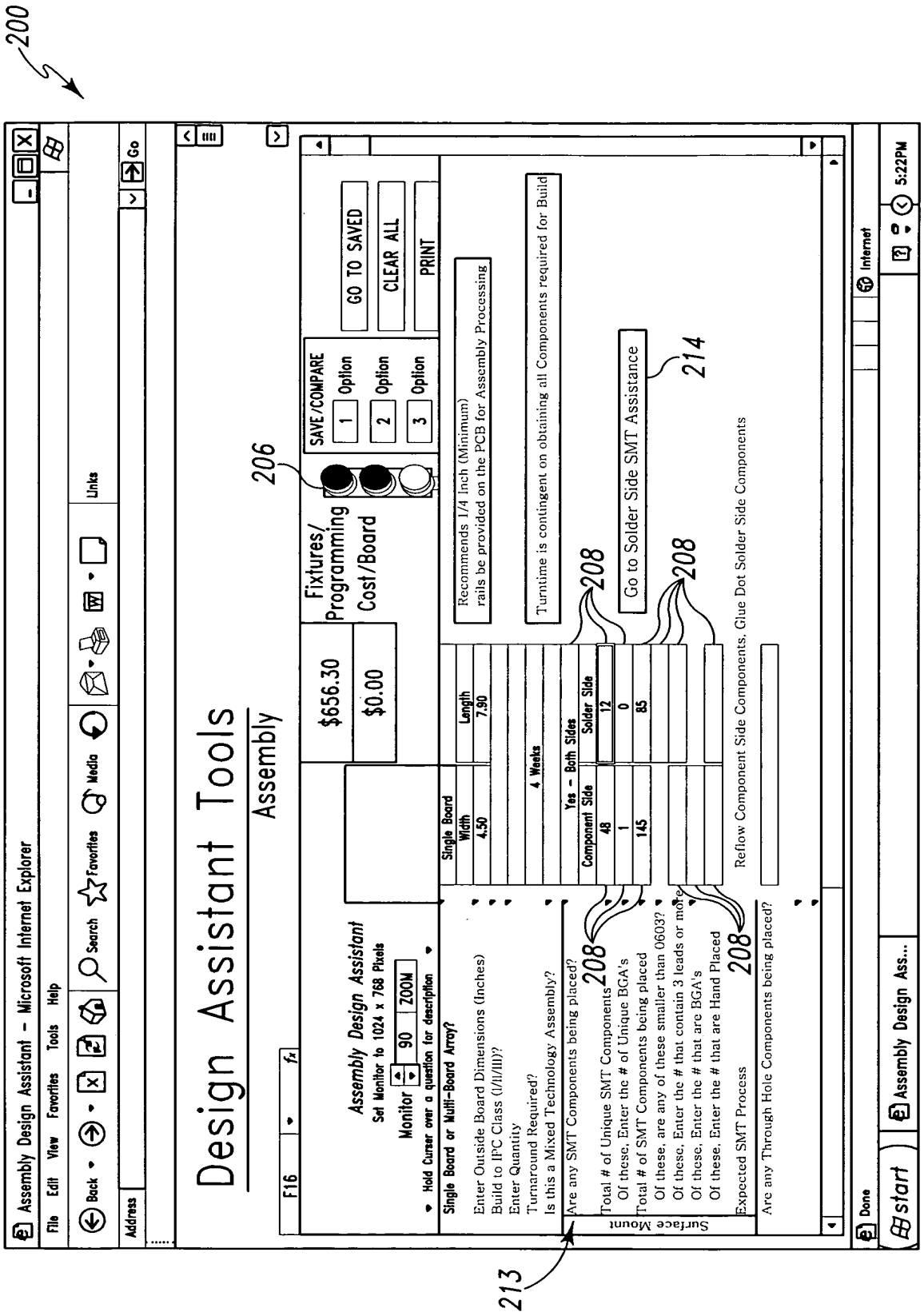

200
Assembly Design Assistant - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media Links
Address
Go
Design Assistant Tools
Assembly
206
F16
Assembly Design Assistant
Set Monitor to 1024 x 768 Pixels
Monitor 90 ZOOM
Hold Cursor over a question for description
$656.30
$0.00
Fixtures/ Programming Cost/Board
SAVE/COMPARE
1 Option
2 Option
3 Option
GO TO SAVED
CLEAR ALL
PRINT
Single Board
Width
4.50
Length
7.90
Recommends 1/4 Inch (Minimum) rails be provided on the PCB for Assembly Processing
4 Weeks
Turntime is contingent on obtaining all Components required for Build
Yes - Both Sides
Component Side
Solder Side
Single Board or Multi-Board Array?
Enter Outside Board Dimensions (Inches)
Build to IPC Class (I/II/III)?
Enter Quantity
Turnaround Required?
Is this a Mixed Technology Assembly?
Are any SMT Components being placed?
208
48
12
Total # of Unique SMT Components
Of these, Enter the # of Unique BGA's
1
0
Total # of SMT Components being placed
145
85
Of these, are any of these smaller than 0603?
Of these, Enter the # that contain 3 leads or more
Of these, Enter the # that are BGA's
Of these, Enter the # that are Hand Placed
Expected SMT Process
Surface Mount
Go to Solder Side SMT Assistance
214
Reflow Component Side Components, Glue Dot Solder Side Components
Are any Through Hole Components being placed?
213
Done
Internet
start
Assembly Design Ass...
5:22PM

Fig. 7

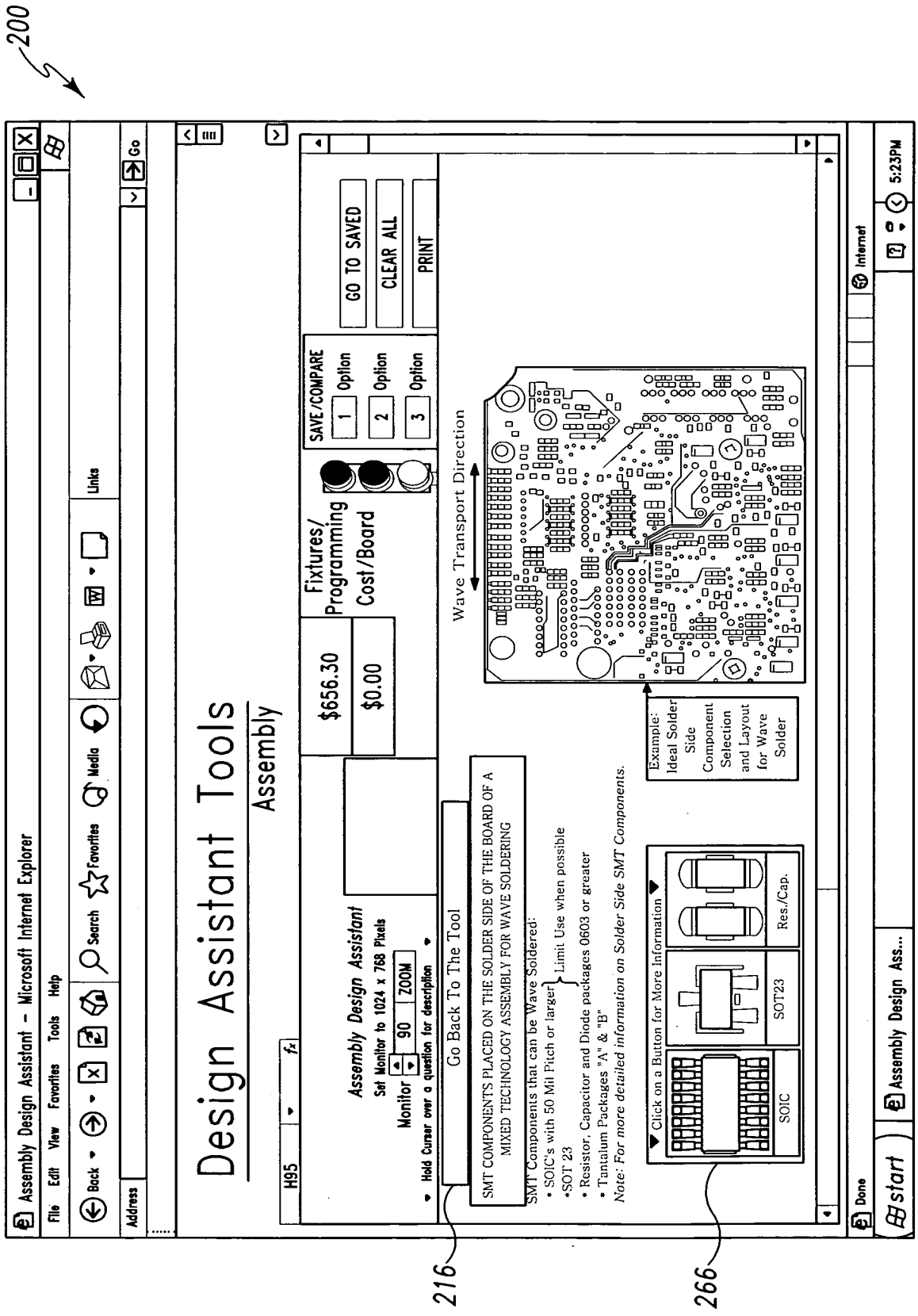

200
Assembly Design Assistant - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media Links
Address Go
Design Assistant Tools
Assembly
H95
Assembly Design Assistant
Set Monitor to 1024 x 768 Pixels
Monitor 90 ZOOM
Hold Cursor over a question for description
$656.30
$0.00
Fixtures/ Programming
Cost/Board
SAVE/COMPARE
1 Option
2 Option
3 Option
GO TO SAVED
CLEAR ALL
PRINT
Wave Transport Direction
Go Back To The Tool
SMT COMPONENTS PLACED ON THE SOLDER SIDE OF THE BOARD OF A MIXED TECHNOLOGY ASSEMBLY FOR WAVE SOLDERING
SMT Components that can be Wave Soldered:
• SOIC's with 50 Mil Pitch or larger } Limit Use when possible
• SOT 23
• Resistor, Capacitor and Diode packages 0603 or greater
• Tantalum Packages "A" & "B"
Note: For more detailed information on Solder Side SMT Components.
Example: Ideal Solder Side Component Selection and Layout for Wave Solder
Click on a Button for More Information
SOIC
SOT23
Res./Cap.
216
266
Done
Internet
start
Assembly Design Ass...
5:23PM

Fig. 8

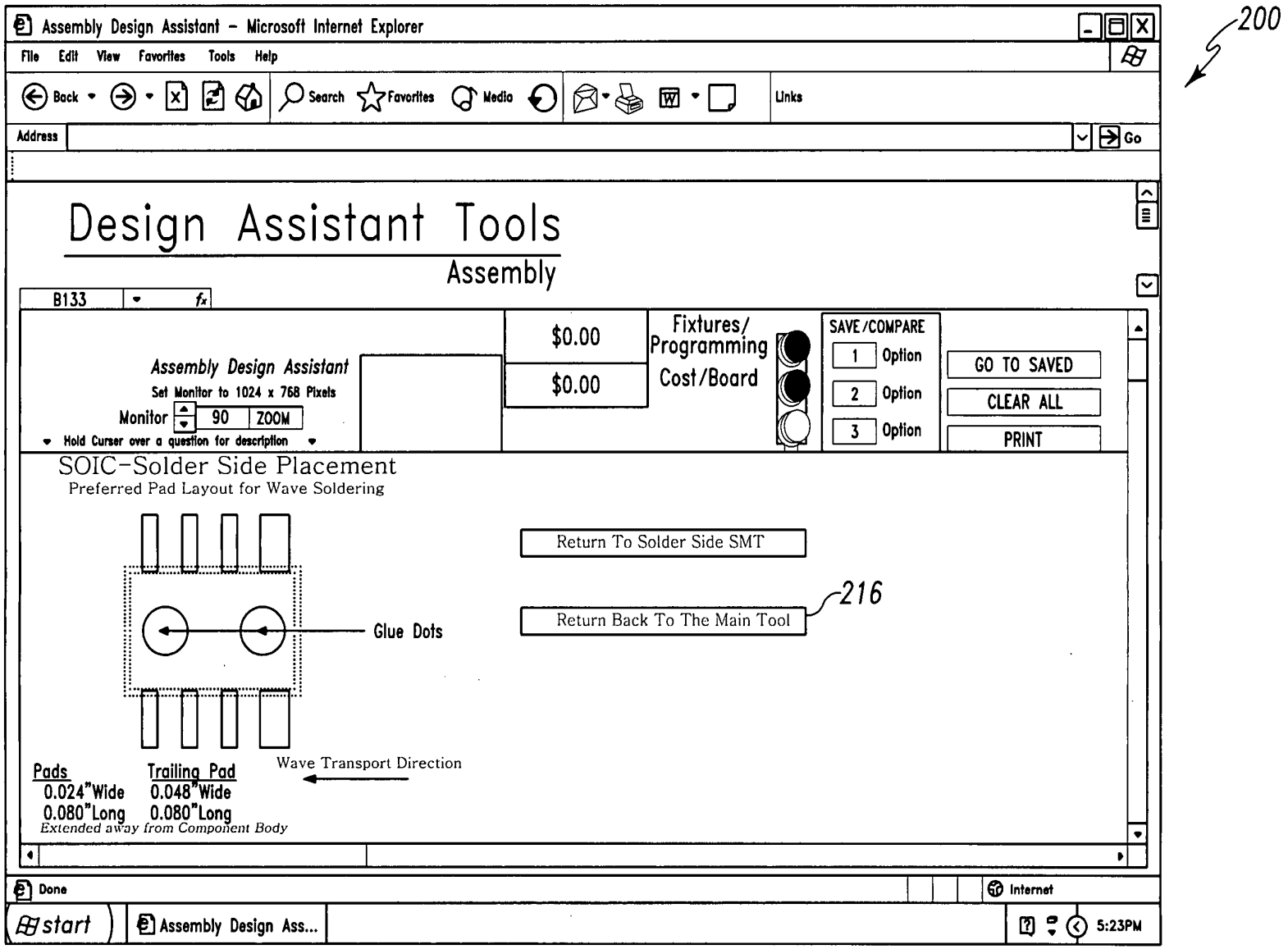

Assembly Design Assistant - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media Links
Address Go
Design Assistant Tools
Assembly
B133
Assembly Design Assistant
Set Monitor to 1024 x 768 Pixels
Monitor 90 ZOOM
Hold Curser over a question for description
$0.00
$0.00
Fixtures/ Programming Cost/Board
SAVE/COMPARE
1 Option
2 Option
3 Option
GO TO SAVED
CLEAR ALL
PRINT
SOIC-Solder Side Placement
Preferred Pad Layout for Wave Soldering
Glue Dots
Return To Solder Side SMT
Return Back To The Main Tool
216
Wave Transport Direction
Pads 0.024"Wide 0.080"Long
Trailing Pad 0.048"Wide 0.080"Long
Extended away from Component Body
Done
Internet
start
Assembly Design Ass...
5:23PM
200

Fig. 9

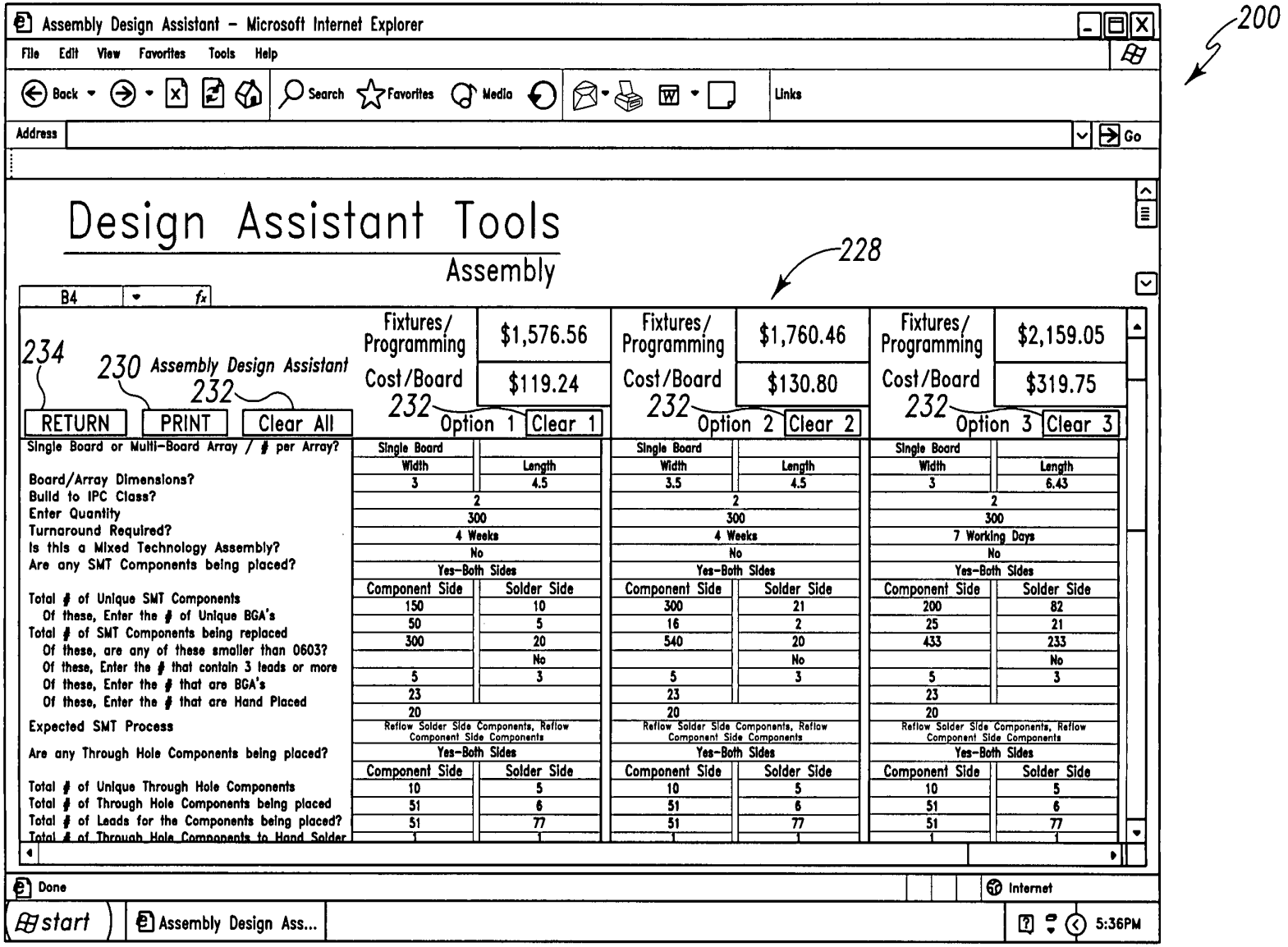

Assembly Design Assistant - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media Links
Address Go
200
Design Assistant Tools
Assembly
228
B4
234
230 Assembly Design Assistant
232
RETURN
PRINT
Clear All
Fixtures/ Programming
$1,576.56
Cost/Board
$119.24
232 Option 1 Clear 1
Fixtures/ Programming
$1,760.46
Cost/Board
$130.80
232 Option 2 Clear 2
Fixtures/ Programming
$2,159.05
Cost/Board
$319.75
232 Option 3 Clear 3
Single Board or Multi-Board Array / # per Array?
Board/Array Dimensions?
Build to IPC Class?
Enter Quantity
Turnaround Required?
Is this a Mixed Technology Assembly?
Are any SMT Components being placed?
Total # of Unique SMT Components
Of these, Enter the # of Unique BGA's
Total # of SMT Components being replaced
Of these, are any of these smaller than 0603?
Of these, Enter the # that contain 3 leads or more
Of these, Enter the # that are BGA's
Of these, Enter the # that are Hand Placed
Expected SMT Process
Are any Through Hole Components being placed?
Total # of Unique Through Hole Components
Total # of Through Hole Components being placed
Total # of Leads for the Components being placed?
Total # of Through Hole Components to Hand Solder
Single Board
Width
Length
3
4.5
2
300
4 Weeks
No
Yes-Both Sides
Component Side
Solder Side
150
10
50
5
300
20
No
5
3
23
20
Reflow Solder Side Components, Reflow Component Side Components
Yes-Both Sides
Component Side
Solder Side
10
5
51
6
51
77
Single Board
Width
Length
3.5
4.5
2
300
4 Weeks
No
Yes-Both Sides
Component Side
Solder Side
300
21
16
2
540
20
No
5
3
23
20
Reflow Solder Side Components, Reflow Component Side Components
Yes-Both Sides
Component Side
Solder Side
10
5
51
6
51
77
Single Board
Width
Length
3
6.43
2
300
7 Working Days
No
Yes-Both Sides
Component Side
Solder Side
200
82
25
21
433
233
No
5
3
23
20
Reflow Solder Side Components, Reflow Component Side Components
Yes-Both Sides
Component Side
Solder Side
10
5
51
6
51
77
Done
Internet
start
Assembly Design Ass...
5:36PM

Fig. 10